

Evansville Community Tennis Association Master Plan

An Honors Thesis (HONRS 499)

by

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**Thesis Advisor
Wes Janz**

A handwritten signature in black ink, appearing to read 'Wes Janz', with a large, stylized flourish at the end.

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Abstract:

The Evansville Community Tennis Association (ECTA) charges itself with growing tennis in the city of Evansville, Indiana. Starting in the year 2000, ECTA established the expansion of the Wesselman Tennis Center as one of its primary objectives to accomplishing this goal. In the summer of 2009 as part of my Senior Honors Thesis, I developed a conceptual discussion plan for the expansion of the Wesselman Tennis Center. This thesis document explains the conceptual discussion design phase while also providing a framework for the completion of the programmatic design phase, thus enabling the project to move into schematic and design development stages in the near future.

Acknowledgements:

I would like to thank Wes Janz, my thesis advisor, for inspiring my work and guiding me through the process of designing with the Evansville community.

I would like to give special thanks to the College of Architecture and Planning faculty for giving me the tools to practice and succeed in the architecture profession.

I would like to thank VPS Architecture for giving me the opportunity to present my work to the Mayor of Evansville and the Evansville Department of Parks and Recreation.

I would like to thank the Evansville Community Tennis Association for its members' continued support and guidance throughout this project's development.

Author's Statement:

My interest and involvement with this project began nearly ten years ago when I began playing competitive tennis on the courts at Wesselman Tennis Center. Having grown up loving the game of tennis, I was always eager to take on leadership roles within the local Evansville Community Tennis Association (ECTA). I volunteered at local tournaments, serving as the assistant director for two junior tournaments. As a high school player, I was respected for my tennis ability, but more importantly, for my good intentions and gentleman manners on the court, receiving the ECTA Player of the Year in 2005. Also, as a tennis instructor, I worked under ECTA for five years, serving as a site director and receiving the ECTA Service Award in 2007.

Having a broad understanding of tennis, knowing the facilities the game requires, and feeling a vested interest in the well-being of ECTA as an organization, I began to take interest four years ago in the happenings at the center. My dad, serving on the board as treasurer, worked with a local engineer to design the club house that was built in 2006. Having seen this process as a freshman in college, I wished at the time that I had the skills to aid in the design and the ability to question design decisions for the facility. As a first year architecture student, however, I lacked the knowledge and prudence to have such an influence. I, however, found other ways to be involved, working on a team to construct a 100' long, 20' tall viewing stand at the Wesselman Tennis Center.

When I returned from Ball State University after my third year in architecture, I again volunteered for another tennis tournament, and I walked into a conversation with the President of ECTA, Karen Wilson. We talked about the Wesselman facility expansion, and seeing the opportunity, I volunteered to provide the organization with a master plan that would provide points of discussion for further conceptual development. Simultaneously, I planned to develop the project as part of my Senior Honors Thesis at Ball State University.

During this summer, I was working full time for VPS Architecture, average 50 hours a week. It was after 10 hours of work that I sat down for many nights to visualize and illustrate ECTA's conceptual discussion plan. After seeking approval from ECTA, I presented the conceptual plans to the Mayor of Evansville and Dan Schall, the Head of the Department of Parks and Recreation in Evansville.

The conceptual discussion plans aim to help ECTA articulate their goals and visions for the expansion of the Wesselman Tennis Center. With the conceptual discussion design and programmatic design steps established in the following Senior Honors Thesis, I hope to lead ECTA through these phases and into design development in the near future.

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Introduction:

For the proper development of the Wesselman Tennis Center Master Plan, the design process must be guided and understood. It must be organized and comprised of design phases and sequential steps to ensure the proper design solution is found. Designing these phases and steps becomes as important to the design process as the final architectural design solution. These phases and steps are not to be seen as isolated events but as elements that build upon and feed back into each other, providing an informed system by which to arrive at the best design solution. The following information details Phase I - conceptual discussion design - and Phase II - programmatic design - of the design process, establishing a foundation for the design of the Wesselman Tennis Center to begin. The subsequent phases – schematic design, design development, working drawings, construction, and construction administration – are not developed in this document, as they will develop only after ECTA becomes further involved.

Phase I, conceptual discussion design, explains the use of two discussion design boards to spark conversations regarding the expansion plan. The discussion design becomes a stimulus to help the organization express its vision and the end goals it wishes to accomplish.

Phase II, programming, involves assessing the needs and wants of the users to develop goals that fulfill the client's objectives, building upon Phase I. Under Phase II, five steps of programming are explained. Steps have been adapted or interpreted to better fit the Evansville Community Tennis Association operating structure. Where necessary, documents and preparations are illustrated, ensuring the productive and efficient involvement of ECTA and community members in the design process.

Phase I: Conceptual Discussion Design

“Conceptual discussion design” is the first design phase. Francis Ching, Professor Emeritus of the University of Washington, describes conceptual design as the “recognition of a problematic condition and the decision to find a solution to it. This is the critical phase of the design process since the nature of a solution is inexorably related to how a problem is perceived, defined, and articulated” (Ching IX). This design phase’s primary goal is to help the organization express its vision and the end goals it wishes to accomplish. In this phase, the client is provided with images and visuals intended to evoke discussion about the facility and help the organization establish how they define the design problem.

Discussion Design Boards

The discussion design boards assist ECTA in the formulation of its vision and end goals. In the discussion design boards, informed decisions have been made and presented graphically. These graphic illustrations aim to elicit responses and opinions regarding the Wesselman Tennis Center’s focus as a whole. Discussion design board 1 and 2 present different areas of the project and possible design solutions addressing each area.

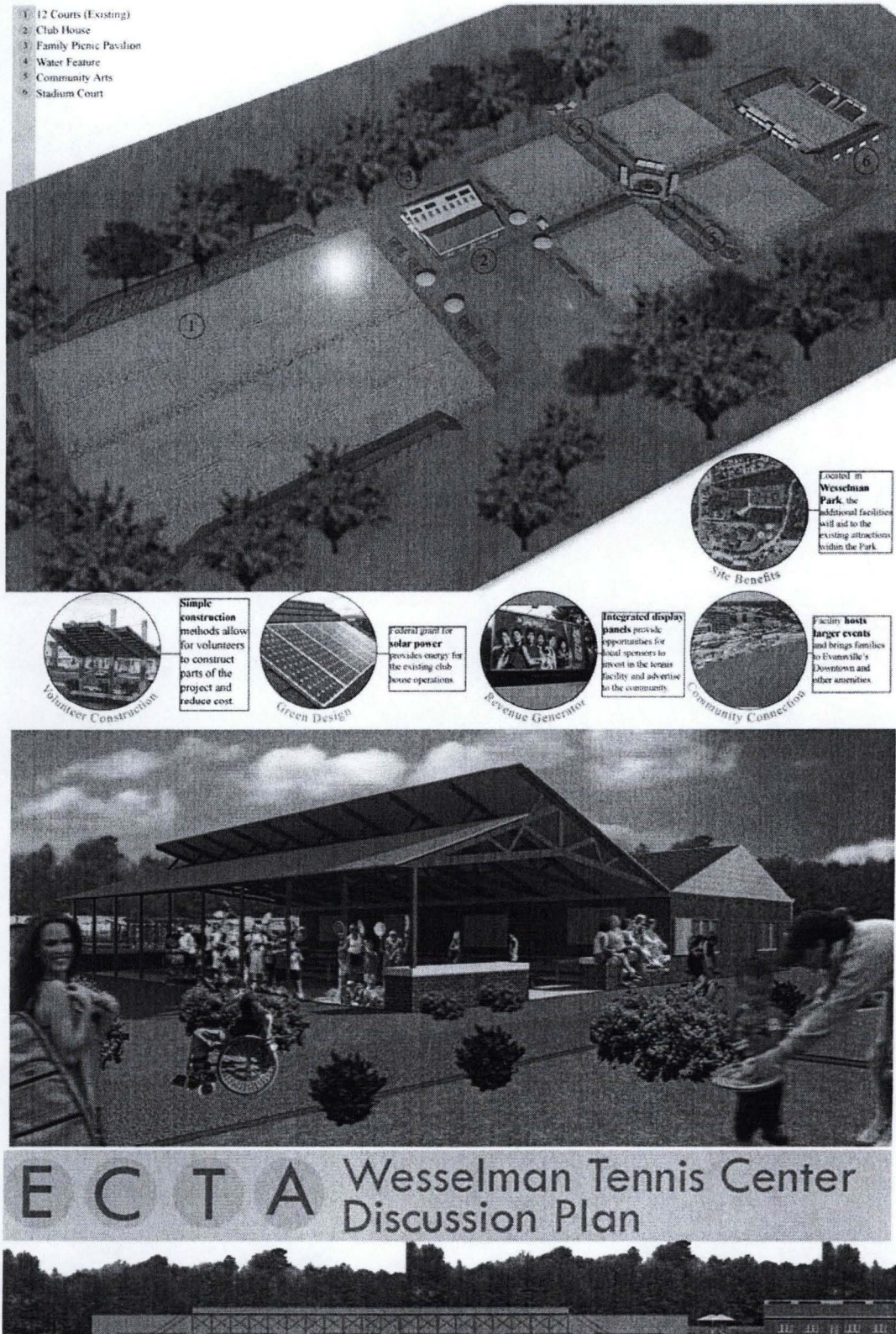
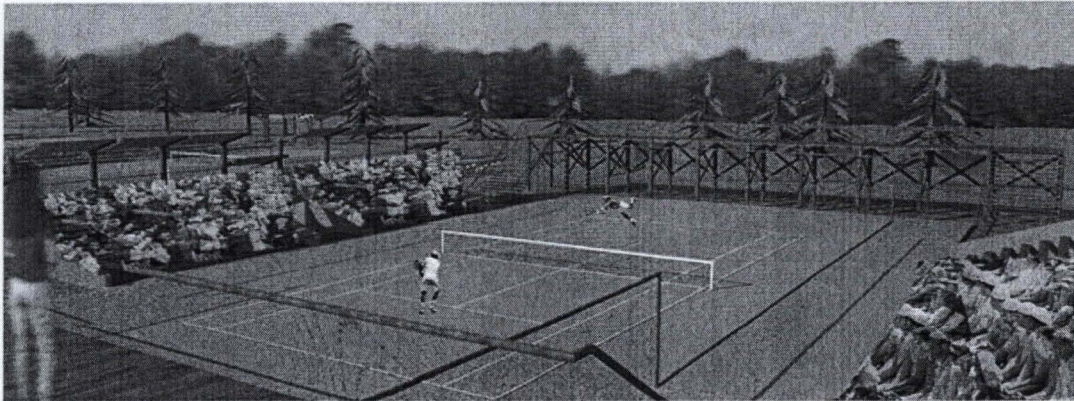
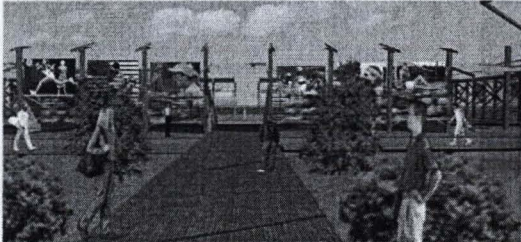


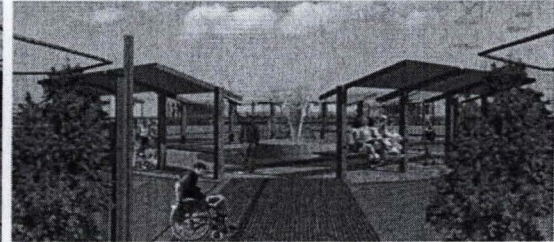
Fig. 1. Discussion Board 1 explains master plan, goals, and architectural elements.



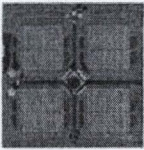
ON THE SHOW COURT Stadium Court hosts national collegiate tennis matches and USTA Professional Events. Viewing areas enclose all sides.



SPONSORING THE EXCITEMENT Stadium Court provides opportunities for endorsements and sponsorships, promoting the community and giving back.



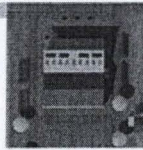
SPLISH SPLASH Water feature provides a cool, refreshing place to gather, socialize, and watch your favorite players battle it out on the nearby courts.



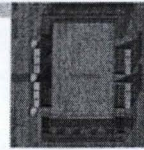
WALKWAYS
Light-colored wooden decks provide more play area, opportunities, and allow for better viewing areas for fans and parents.



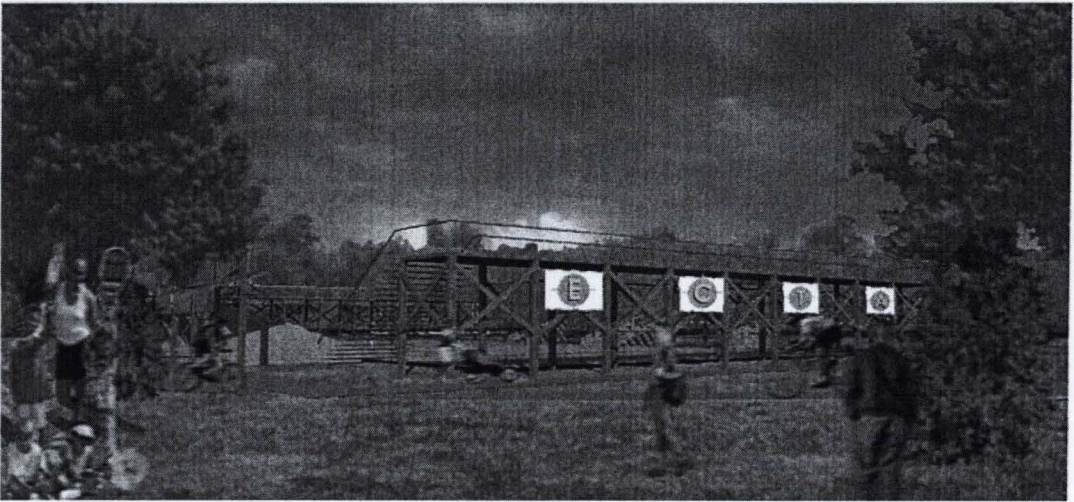
USTA
Central is a key feature as a gathering space. On-site courts create shaded viewing areas for fans and spectators. Viewers can create opportunities for community art.



USTA
Tennis pavilion is a gathering place and welcome function to host the area for parents and spectators. The pavilion can host a variety of events and activities.



USTA
Stadium court creates viewing opportunities for high school, college, and pro tennis tournaments. Ample open-air viewing opportunities make this a viable area for the tennis center.



VISIONS FOR THE FUTURE

Everette Community Tennis Association was created in 2000 when the Everette Tennis Facility began supporting junior tennis and The University Tennis Club added recreational tennis to help serve the local tennis community.

ECTA is involved in area tennis at all levels, including Youth and Adult Tennis programs, USTA Adult and Junior Tournaments, USTA League tennis, and a Middle School Tennis program among others.

ECTA's current goal is the expansion of the tennis facilities at the Westshore Tennis Center. Improved facilities will allow the Everette Tennis community to host larger events and attract more people to Everette to play tennis.

"Our mission is simple.
GROW tennis in the region."

ECTA



Fig. 2. Discussion Board 2 explains the stadium court, phasing, and design features.

Explaining Discussion Design

The discussion design document proposes an expansion of the existing Wesselman Tennis Center from a twelve court facility to twenty-one court facility. The needs of the current facility require greater capacity than that currently available. The expansion aims to alleviate this pressure, providing eight additional courts and a stadium court. The eight additional courts break from the traditional linear design, becoming California-style courts, allowing for more fan viewing areas and greater visibility.

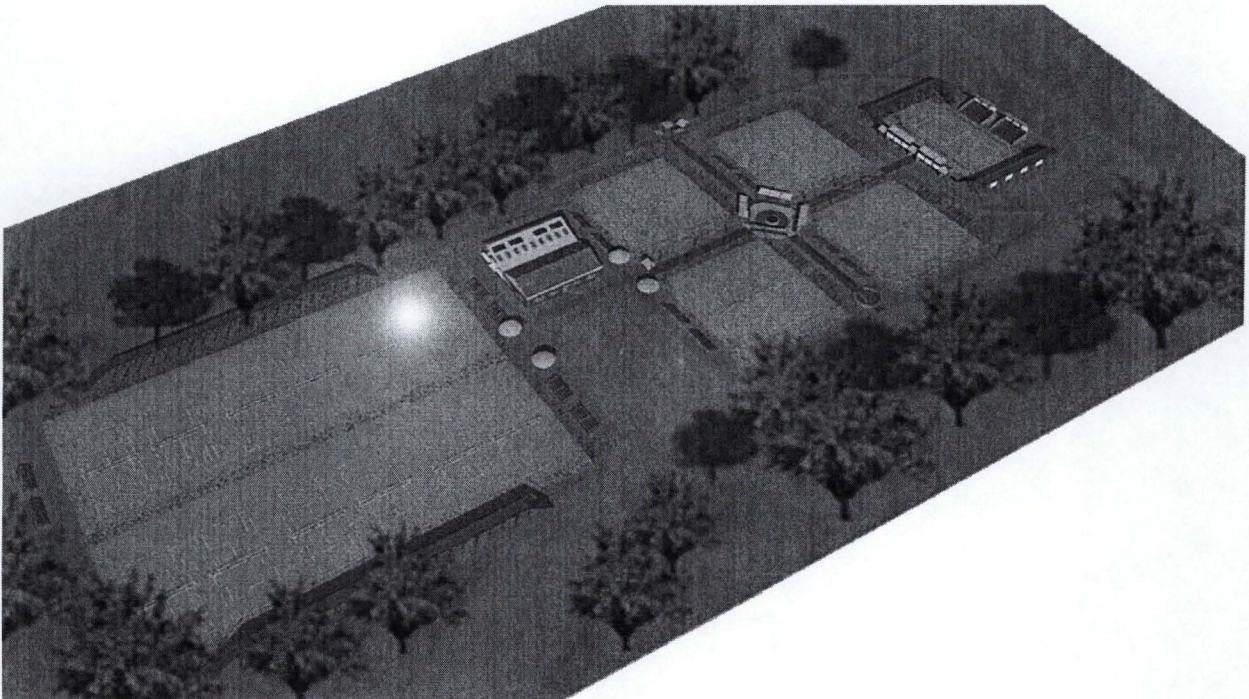


Fig. 3. Site plan of the proposed eastern addition to original twelve courts and clubhouse.

Currently, the existing clubhouse is a place of indoor activity only. A lack of exterior seating prevents it from truly serving as the complex's center, partially undermining its purpose. In the discussion design, the clubhouse is interpreted as a place of both indoor and outdoor activity. The "Picnic Pavilion" becomes an additional outdoor structure attached to the existing clubhouse. This place is used as a social gathering area between matches, a space for resting,

eating, and conversations. While the current facility remains inactive after hours, the Picnic Pavilion provides the ability to be rented out to the community, furthering the use of the Wesselman Tennis Center into the night time and weekends.

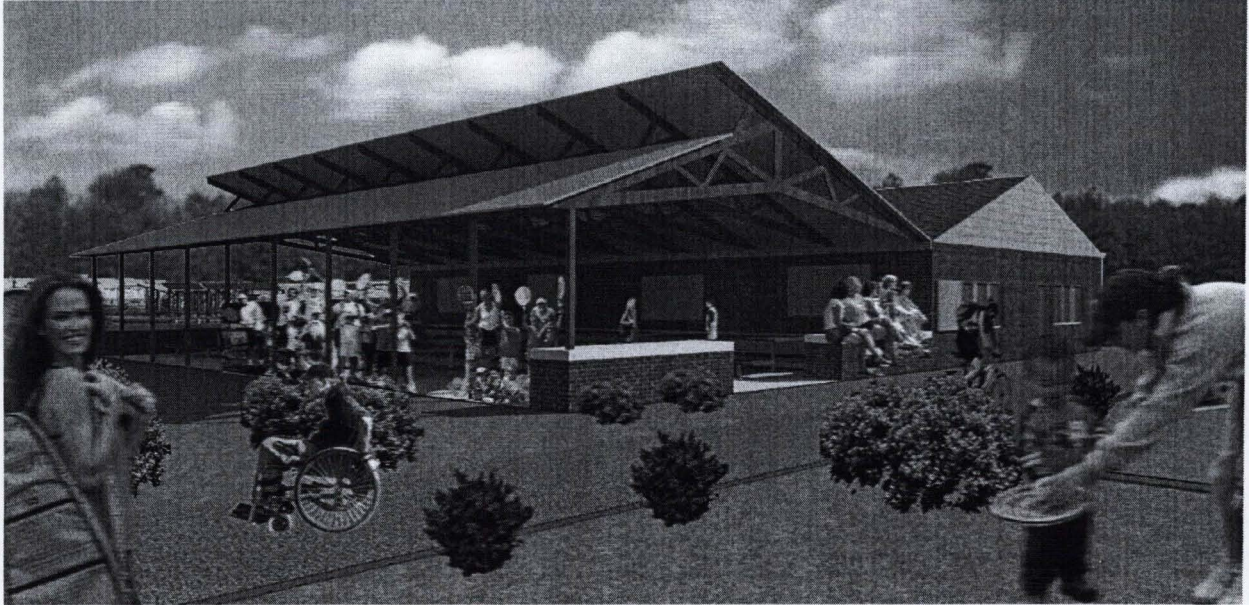


Fig. 4. The Picnic Pavilion is designed to connect with the existing clubhouse.

In an effort to create a Tennis Center with a stronger experience for the viewers and players, a strong axis pulls from the existing club house, creating a walkway flanked on both sides by courts paired California-style. Where the series of four courts come together, a central fountain is created, providing both an aesthetic element and necessary cooling during the hot summer months. The central fountain also serves as a gathering and meeting place for tennis players, providing the seating to watch both matches and people walking by. At this fountain, a cross axis establishes itself, providing places for viewers to watch from bleachers flanking both sides of the path.

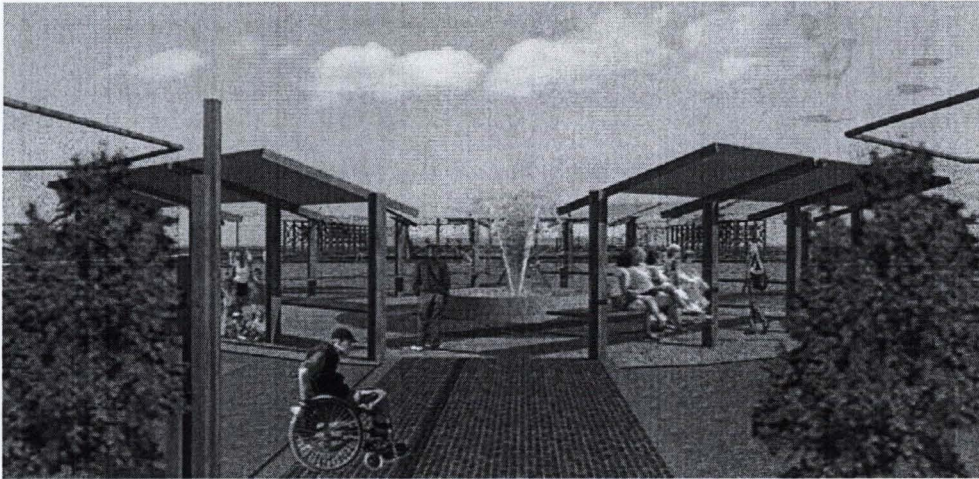


Fig. 5. The water feature serves provides an attractive space where the two axis meet.

At both terminations of the cross axis, community art is incorporated, seeking to create a public space more expressive and entertaining for visitors. This community art aims to engage the citizens of Evansville into their city's heritage and identity. Furthermore, these art works provide chances for local college art students and professional artists to contribute to the project, enabling the tennis center to create stronger community connections and interests.

The termination of the main axis is the Stadium Court, a court surrounded on all sides by stadium seating. This court provides the necessary "hype" factor, placing Evansville on a regional stage for tennis both at the high school and at the collegiate level. One fundamental purpose of the stadium court is to create a unique experience for visitors, hoping to create in them exciting and fond memories that encourage them to return to Evansville. A second fundamental purpose of the stadium court is to provide a place for the Women's Pro-Amateur Event, a tournament on the women's professional tennis circuit. The stadium court will be the "show" court, providing necessary seating and a big stage feel. For the circulation around the courts, a track creates a place for parents to walk while kids are practicing, or for athletes to train in controlled distances. The loop connects to existing circulation paths near the street and south

of the courts, further reinforcing the complex's ability to exist harmoniously with the other functions of the park.



Fig. 6. Stadium Court creates a powerful image for tennis within the community.

Environmentally-sensitive Design:

While addressing the needs of tennis players and fans, the design also aims to positively address environment in the process, through five simple ideas: volunteer construction, green design, revenue generator, community connections, and site benefits.

Volunteer construction emphasizes the ability to engage the community in the construction of certain features of the project. This enables the Evansville Community Tennis Association, a non-profit organization, to fund the project by saving money through volunteer labor. This also aims to engender the community to the project, creating pride in their work, and building upon this as a source of inspiration for upkeep, maintenance, and everyday use of the facility.

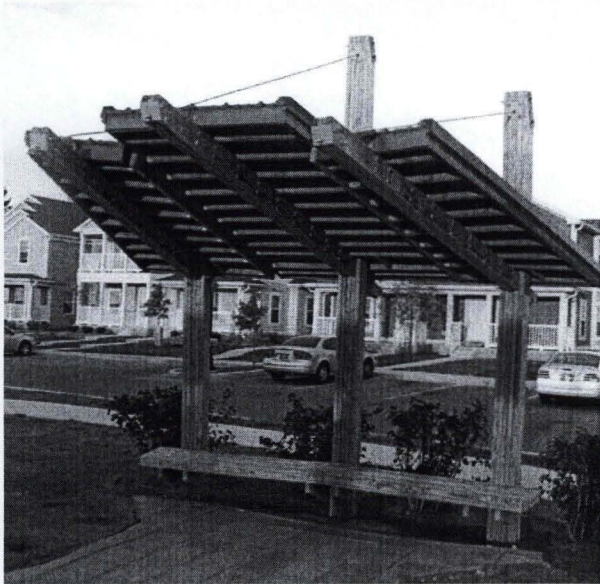


Fig. 7. Example of a community design-build/volunteer project.
Olon Dotson, Muncie Urban Design Studio, Ball State University

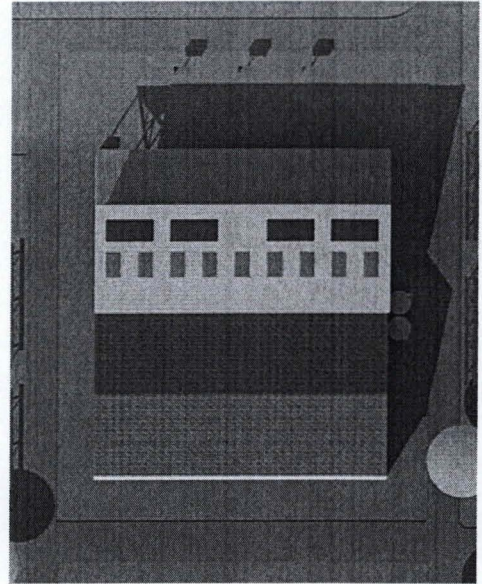


Fig. 8. Roof with solar panels and rain water collection.

Second, energy and water, aims to incorporate and display sustainable design elements in an effort to create a more energy-efficient tennis center while also promoting green design to the Evansville public. The splay of the Picnic Pavilion's roof, along with its south orientation, make it ideal for the placement of solar panels. The splay of the roof also faces north, thus shading its occupants from hot summer sun while admitting northern light. A water cistern catches rain water where the two roofs meet. This collected water serves to irrigate the landscape around the tennis center and is used as gray water in the building's plumbing systems. Furthermore, the project aims to use local materials, including wood, brick, and stone, to create an environment supportive of Evansville's construction market and reinforcing of its architectural character (see Figure 6 above).

Third, revenue generator, looks at the economic viability of the project by integrating display panels into the design. These display panels provide a place for community companies to sponsor and advertise at different areas throughout the Wesselman Tennis Center. Not only do these provide economic opportunities, but they also provide places to show community pride, reinforcing Evansville's identity.



Fig. 9. Advertisement panels on stadium court provide places for local companies to advertise.

Fourth, community connections, looks at the wider breaching impact of the improvement to the Wesselman Tennis Center. Hosting large scale tournaments and events at the Wesselman Tennis Center will draw larger crowds to Evansville from the surrounding area, helping to fill hotels and spur economic growth downtown. This part of the concept also involves looking at ways Wesselman Tennis Center can physically and psychologically connect to the happenings downtown.

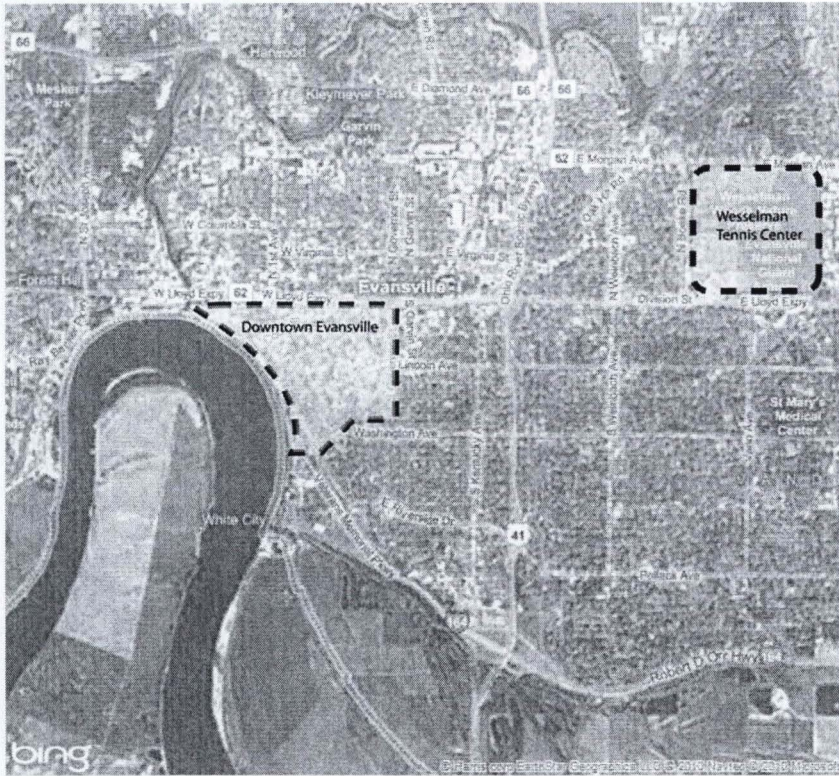


Fig. 10. Relationship between Wesselman Tennis Center and downtown Evansville.

Fifth, site benefits, hypothesizes the impact the Wesselman Tennis Center will have on the surrounding Wesselman Park and the nature reserve therein. This part of the design also takes into account the relocation of a community field used for picnics to another area of the park, providing similar opportunities as those that previously existed.

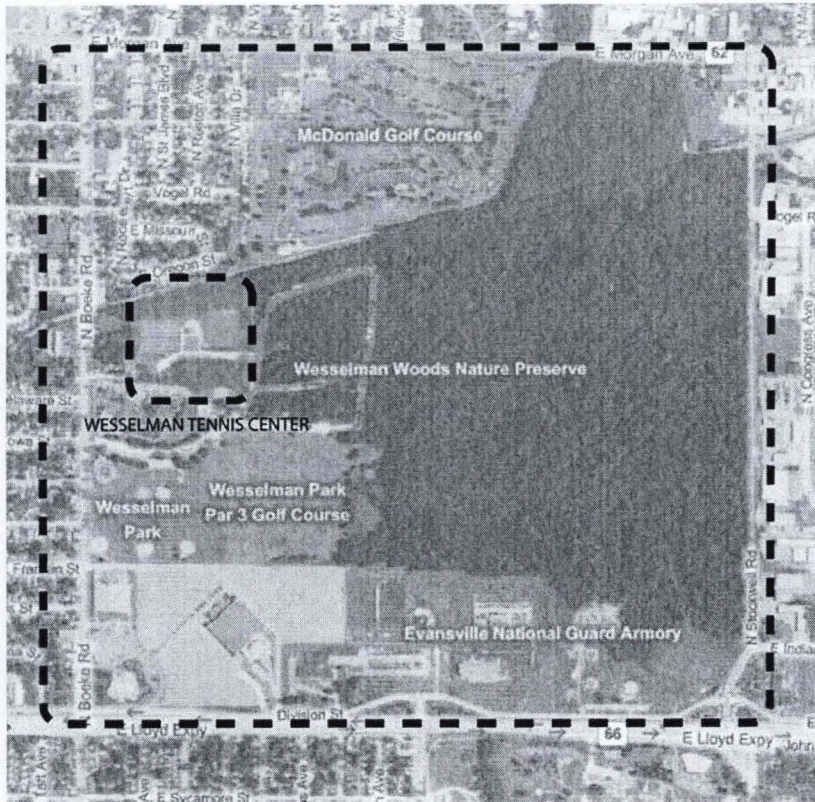


Fig. 11. The Wesselman Tennis Center's relationship to the surrounding public park.

An important component of the design involves the project phasing, as the Evansville Community Tennis Association will not be able to finance the entirety of all project aspects simultaneously. In the phasing, the California-style courts become the first phase, Phase 1-A. Due to the need for more courts, which correlates into more league players and more revenue earned, the building of the eight California-courts becomes the initial focus of the building program.

The next phase, Phase 1-B, involves the creation of the central fountain and the cross axis, along with the art at each end termination. Although the fountain and cross axis are not imperative to the functioning of the facility, they create an added element of excitement and activity, providing the necessary community support to help raise additional funds for the Picnic Pavilion and the Stadium Court.

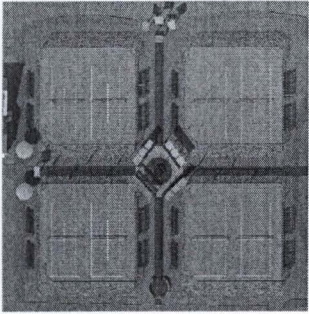


Fig. 12. Phase 1-A

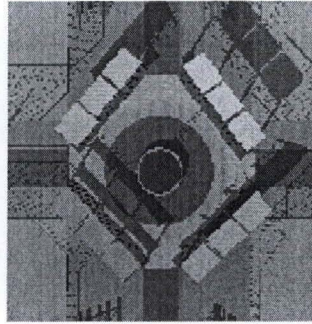


Fig. 13. Phase 1-B

Phase 2, the Picnic Pavilion, becomes the next phase of the design. Its functions accommodate the increased amount of users generated from the creation of the new tennis courts. The Picnic Pavilion provides additional rental opportunities, increasing fundraising possibilities to further the building of the next phase, the Stadium Court.

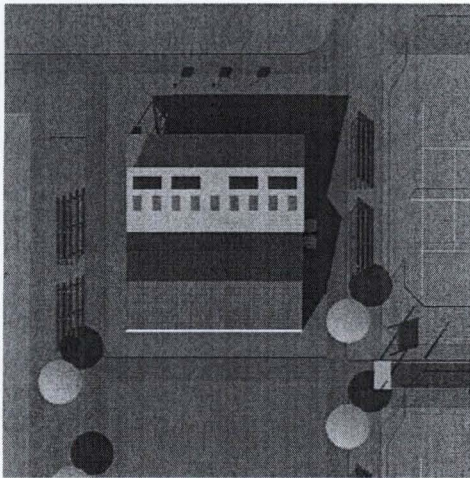


Fig. 14. Phase 2 aims for the completion of the picnic pavilion.

Lastly, Phase 3, the stadium court, is undertaken. The stadium court is viewed as an anchor to the project, but its absence does not interfere with Wesselman Tennis Center's daily operations and that of league play. In its design, the paths play a vital role in integrating with the existing functions of the park. Furthermore, its prominent placement on the corner of the site creates a strong statement regarding tennis in the Evansville lifestyle. It is the finale to the building program.

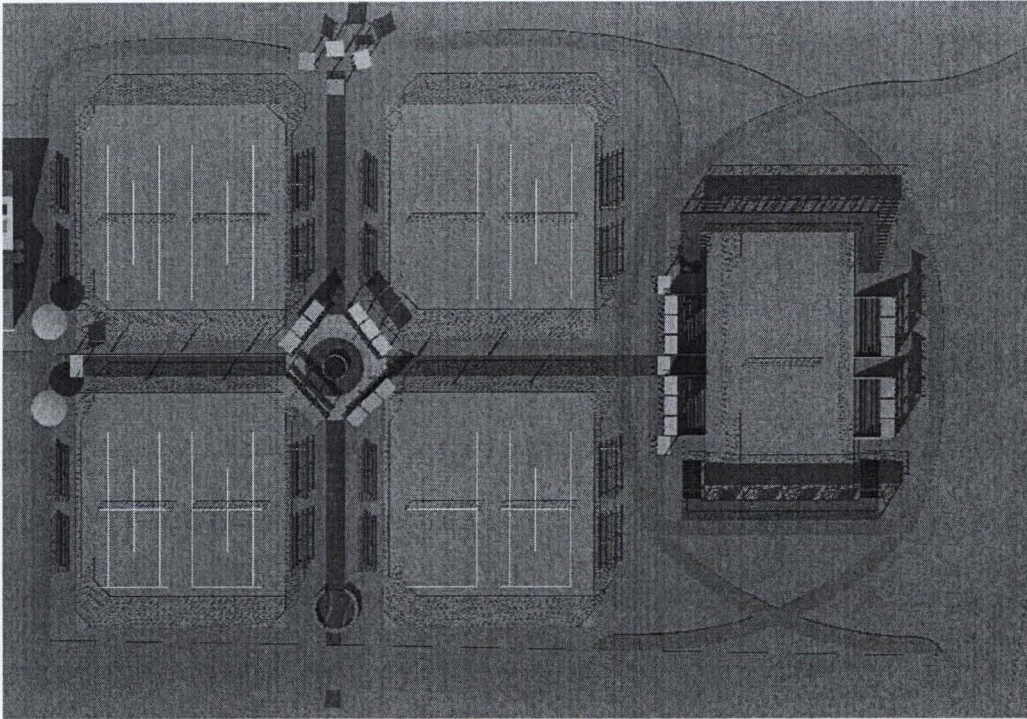


Fig. 15. Stadium court and its relationship to the eight California courts and the surrounding site.

Although these ideas may overstep what is typically labeled conceptual design, the discussion design boards' aims remain valid. They provide a stimulus for discussion, positive viewpoints, and negatives criticisms that will ultimately help ECTA determine their project goals and organization vision, thus fulfilling the objectives of conceptual design.

Phase II: Programmatic Design

“Programmatic Design” is the second design phase. Before undertaking programmatic design, it is necessary to understand what programming is and the concepts related to it.

Programming is defined as assessing the needs and wants of the users to develop a plan that fulfills the client’s objectives.

Design firm Hellmuth, Obata + Kassabaum (HOK) is observed for its innovative approach to programming. First, William Pena describes HOK’s understanding of programming as a “heuristic process, and not an algorithm” (Pena and Parshall 26). The process of developing the tennis center is experimental and will require trial and error to arrive upon the correct solution. Second, HOK states the “importance of both feed forward and feedback” cycles (54). It is important that information acquired throughout the process plays a critical role not only in the influencing subsequent design decisions but also informing those decisions already made. In this manner, new developments revise the project, creating a more informed overall design for ECTA. Third, HOK describes programming as “holistic and atomistic design” (56). Under this approach, the programmatic design acknowledges various scales, providing for the success of the project both at a community scale and at that of the individual tennis player.

With the philosophical understanding of programming established, the format of the programmatic design must be explained. Programmatic design begins with the “five step process” which helps transform the goals from “conceptual discussion design” into a refined problem statement.

The Five Step Process

Programming is a five step process, with its overarching aim to provide a well defined understanding of the design problem, allowing for the project to move into the next phase, design development (Pena and Parshall 12).

Table 1. Five Step Process

- 1) Establish Project Goals – “What does the client want to achieve, and why?”
 - 2) Collect and Analyze Facts – “What do we know? What is given?”
 - 3) Uncover and Test Concepts – “How does the client want to achieve the goals?”
 - 4) Determine Needs – “How much money and space? What level of quality?”
 - 5) State the Problem – “What are the significant conditions affecting the design of the project? What is the general direction the design should take?”
-

Step 1: Establish Project Goals

The first step of the “five step process” is to “establish project goals.” Goals indicate “what the client wants to achieve” (Pena and Parshall 68). The work sheet below, influenced by HOK, helps guide the Evansville Community Tennis Association through the creation of these project goals, considering function, form, economy and time (30).

Table 2. Process Worksheet

1. Function – “What’s going to happen on the site?”

- a. People
- b. Activities
- c. Relationships

2. Form – “Relates to the site, physical environmental (psychological, too) and the quality of space and construction. Form is what you will see and feel. Its what there is now and what will be there.”

- a. Site
- b. Environment
- c. Quality

3. Economy – “Initial budget and quality of construction, but may include operating and life cycle costs.”

- a. Initial Budget
- b. Operating Costs
- c. Life Cycle Costs

4. Time – “Has three classifications – past, present, future – which deal with the influences of history, the inevitability of changes from the present, and projections into the future.”

- a. Past
- b. Present
- c. Future

After brain-storming and discussion has occurred for five to ten minutes on each goal topic, a revised goal statement for each topic should be written out in a concise manner. These goals will be used to guide the design and provide a focus for efforts in terms of additional facilities and expansion plans.

Step 2: Collect and Analyze Facts through Community Participation

The second step of the “five step process” is to “collect and analyze facts” as described by HOK (Pena and Parshall 71). However, with the Evansville Community Tennis Association’s focus on serving the public community, this step has been amended to: “collect and analyze facts through community participation.” Special importance is placed upon community opinion and critique into the design process, labeled as participatory design. Participatory design aims to achieve a greater meeting of social needs, enhanced democracy in the system, and a sense of community ownership (Sanoff 79). There are a few benefits of incorporating participatory design into this step. “First, the user group has an “increased sense of influencing the design decision-making process” (Sanoff 79). Second, the architect is supplied with “more up-to-date and relevant information” than available in the traditional process (Sanoff 79). Third, there exists the ability to enrich professional designers with “non-professional aspects of social activity” (Sanoff 79).

Before the participation group can be identified, a series of questions must be answered to help define the participation groups’ role and its relationship to other participants and the design process (Sanoff 58). The following questions prove important to define the role of participants in the design of the Wesselman Tennis Center.

Table 3. Defining Participatory Design (Sanoff 58)

Q: What do we wish to have performed by the participation program?

A: The participation group will give input and guidance related to their specific roles and the use of the Wesselman tennis site in visual, vocal, and written form.

Q: Where do we wish the participation road to lead?

A: The participation group will lead to the architects a better understanding of the needs of specific user groups – tennis players, fans, parents, children - and allow for a more informed and functional design. Their participation is also intended to generate enthusiasm for the project and feelings of community ownership.

Q: How should people be involved?

A: Participants will be involved in two different ways: direct consultation and indirect consultation, with each contributing at different points of the design process.

Q: When in the planning process is participation needed or desired?

A: The direct participation group is needed for the conceptual discussion design phase. Upon completion of this phase, the programming phase will require the input of the indirect participation group.

Q: Is the participation intended to generate ideas?

A: The participation is intended to generate new ideas that will be incorporated and/or tested as the design of the Wesselman Tennis Center progresses.

Q: Is it to identify attitudes?

A: Participatory design will be used to observe attitudes, which will allow the architects and direct participation group to anticipate any concerns that could be threatening to project completion or implementation. *Q:* Is it to disseminate information?

A: The participatory meetings will also help in generating buzz and interest around the community, and hopefully encourage others to get involved in the planning and use of the facility.

Q: Is it to resolve some identified conflict?

A: The participation is meant to identify and address conflicts presented by the various interest groups, most notably with site access to Boeke Road and light pollution created by the courts' overhead lights. It is the work of the architect to synthesize and compromise on issues presented during the participatory period.

Q: It is to review a proposal?

A: The indirect participatory sessions, in a guided way, will be asked to consider their own needs and wants in regards to the conceptual plans that have been developed by the focus group thus far. This will provide a better structured environment and more directed questions and focused answers.

Knowing the influence participants will have, it now is important to identify the types of participants and the degree of influence each will have. The participants can be divided into two categories, a direct consultation group and an indirect consultation group. The direct consultation group will be comprised of people having the most influence and long standing involvement with the design process. Through prior affiliation with ECTA, they have established their knowledge, communication skills, and ability to give advice on decisions

regarding the tennis center's development. The indirect consultation group is seen as a broader community group, comprised of people who use the facility regularly, but do not have a hand in the decision making process or day-to-day operations. They will be used primarily to help answer questionnaires and surveys regarding particular aspects of the tennis center, thus indirect consultation.

With the two types of participant groups defined, it is now possible recognize the different participants of each focus group. The table below describes the direct participation group, listing each participation, their affiliation with the project, and their expected/intended contribution

Table 4. Direct Consultation Group

Participant: Bob Patton

Position: Facility Maintenance Supervisor

Expected Contribution: As the primary maintenance volunteer for the Wesselman Tennis Center, he will help provide information on strategies to improve site clean-up and upkeep, including landscape issues and court maintenance. Furthermore, he will be able to provide insight into tool use and storage requirements.

Participant: Anne Hazlette

Position: Junior Program Director

Pro-Amateur Tournament Director

Expected Contribution:

As the junior program director, she will provide insight into the functioning of junior lessons, required courts, parent involvement, storage requirements, and other amenities necessary for junior tennis success. As the director for the pro-amateur tennis tournament in Evansville, she will provide insight into its operations from a professional tennis perspective.

Participant: Terry Clements

Position: Treasurer, Evansville Community Tennis Association

Expected Contribution: Mr. Clements' financial knowledge and building/ project management experience will enable him to provide input regarding costs and project feasibility.

Participant: Dan Schall

Position: Executive Director, Evansville Parks and Recreation Department

Expected Contribution: Mr. Schall will provide ECTA with information regarding Wesselman Park's functioning as a whole, ensuring that the new ECTA expansion is aligned consistently with the overall aims of the park. His working knowledge of the park's utilities and services will be of great benefit.

Participant: Karen Wilson

Position: President, Evansville Community Tennis Association

Expected Contribution: Mrs. Wilson's firsthand involvement in junior, high school, and collegiate tennis make her suitable to contribute guiding opinions regarding the functioning of these respective tennis types.

Participant: Branden Clements

Position: Graduate Architect, VPS Architecture

Expected Contribution: Branden's firsthand experience in playing both junior and high school tennis and his architecture degree from Ball State University make him suitable to provide guiding design advice and criticism for the new master plan.

General Meeting Requirements:

Participation at the meetings will be organized and led by the architect with agenda input from the direct consultation group. The direct consultation group will focus on in-depth discussions regarding the five step process of programmatic design. The indirect participation group's opinions, questionnaire results, and survey information will be readily available, serving as a source of information from which to validate design decisions. Participants will be encouraged to actively engage the project, drawing to explain their ideas and writing and discussing to vocalize their concerns.

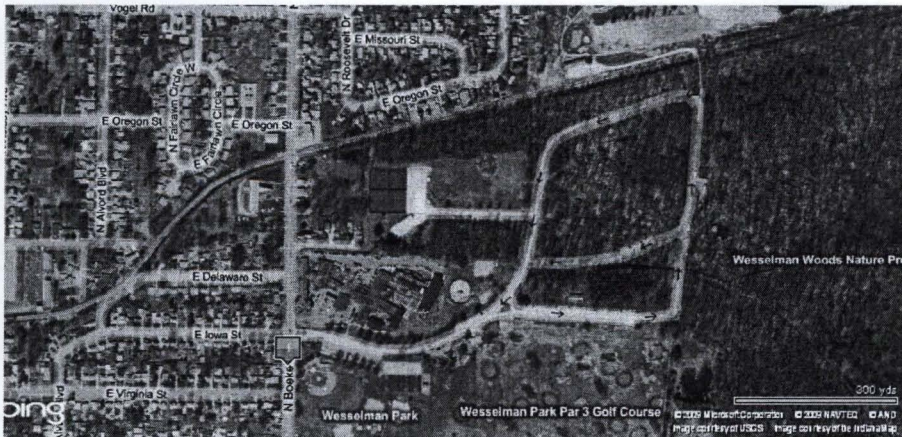


Fig. 16. Large map at direct participation meetings encourages writing and drawing to explain concepts.

Upon identifying key members of the direct participation group, the indirect participation groups should be identified and their means of participation elaborated.

Table 5. Indirect Participation Group

Participant: Southern Indiana Athletic Conference (SIAC) Tennis Coaches

Expected Contribution: Provide general feedback to the functioning of the Wesselman Tennis Center during the SIAC Tournament, one of the staple events of the tennis complex.

Participant: University of Southern Indiana and University of Evansville Tennis Coaches

Expected Contribution: Provide general feedback to the necessity of a stadium court. Further define collegiate tennis's role at the Wesselman Tennis Center.

Participant: League Tennis Teams

Expected Contribution: League tennis teams use the facility frequently during night play. They will provide feedback on issues regarding scheduling of courts, night lighting problems, and additional required recreation spaces.

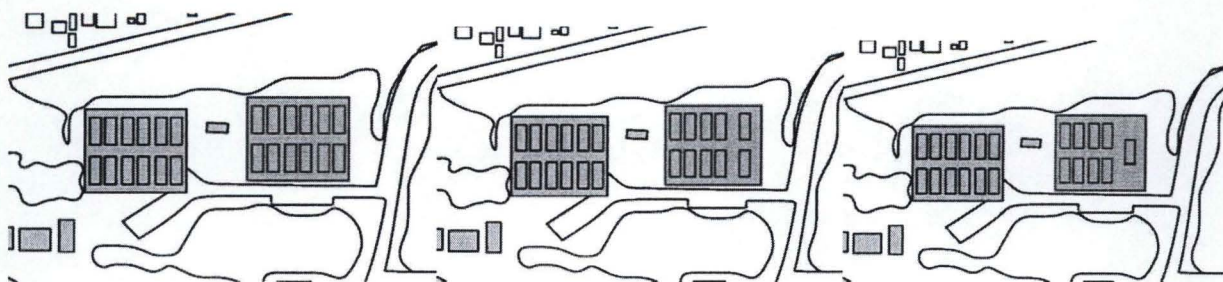


Fig. 17. Sample sheet provides indirection participation group with a series of options, helping to direct focus on productive responses.

Step 3: Uncover and Test Concepts

“Uncover and test concepts” is the third step of the “five step process.”

This step of the design involves finding issues and then generating possible solutions. The question, “How does the client want to achieve the goals?” is answered during this step.

By using the concept identification list below as a guide, the direct participation group can identify concepts relevant to the Wesselman Tennis Center (Pena and Parshall 74 – 85).

Table 6. Concept List Identification

- | | |
|---------------------------------|---------------------------------|
| 1. Priority | 14. Mixed flow |
| 2. Hierarchy | a. Multidirectional or |
| 3. Character | multipurpose |
| 4. Density | 15. Sequential Flow |
| 5. Service Grouping | a. Progression of people and |
| a. Centralized or Decentralized | things |
| 6. Activity Grouping | 16. Orientation |
| a. Integrated or | a. Point of reference |
| compartmentalized | 17. Flexibility |
| 7. People Grouping | a. Expansibility |
| a. Individuals, small groups, | b. Convertibility |
| large groups | c. Versatility |
| 8. Home Base | 18. Tolerance |
| a. Territoriality | a. Tailored or loose fit space |
| 9. Relationships | 19. Safety |
| a. Affinity | a. Codes and safety precautions |
| 10. Communication | 20. Energy Conservation |
| a. Networks or patterns | a. Keep heated area to a |
| 11. Neighbors | minimum |
| a. Independent or | b. Keep heated flow to a |
| interdependent | minimum |
| 12. Accessibility | 21. Environmental Control; |
| a. Signs and symbols | a. Air temperature, light, and |
| 13. Separated Flow | sound |
| a. Separate traffic lanes with | 22. Phasing |
| barriers | a. time-and-cost schedule |
-

Below is a sample of the types of concepts generated from the table above. This information becomes critical in the next step, “determining needs.”

Table 7. Applying Concept Identification

1. Accessibility
 - a. Parking
 - i. Issues of Concern
 1. Current number
 - ii. Possible Solutions
 1. What land is available to ECTA?
 2. Would nicer paths make parking farther a viable option?
 - b. Entrance/Exits
 - i. Issues of Concern
 1. Difficulty in leaving and entering the site
 - ii. Possible Solutions
 1. Through road?
 2. Road Widening?
 3. Maps and signage?
2. Density
 - i. Issues of Concern
 1. Arrangement of tennis courts
 2. Where is the best location for these?
 - ii. Possible Solutions
 1. 8 California courts and 1 large stadium court
 2. 8 California courts and 2 small stadium courts
 3. 10 California courts and 0 stadium courts
3. Flexibility
 - i. Issues of Concern
 1. What is the minimum number of courts to host successful events?
 2. What is the maximum number of courts that will fit on the site?
 - ii. Possible Solutions
 1. Study precedents for similar examples.
 2. Consult USTA guidelines.
4. Affinity
 - i. Issues of Concern
 1. Increased facility storage requirements
 - ii. Possible Solutions
 1. Combine storage into a single out building.

5. Priority
 - i. Issues of Concern
 1. Viability of Community Arts funding
 - ii. Possible Solutions
 1. Community Partnerships
 2. Private Fundraising Opportunities
6. Priority
 - i. Issues of Concern
 1. Stadium Court Seating Capacity
 - a. Number
 2. Possible Solutions
 - a. Provide additional lawn seating on one side.
 - b. Provide bleaches on north and south ends to replace viewing stands.

Step 4: Determine Needs

“Determine Needs” is the fourth step of the “Five Step Process.” This phase answers the questions of “how much money and space” and to “what level of quality?” It also details out the time schedule, who will be involved, cost, the sharing of information, and location and site access during construction (Pena and Parshall 89). A sample schedule of involvement has been defined below in Table 8.

Table 8. Schedule of Involvement

INVOLVMENT IN PROJECT PHASES

Design Phase	Conc. Disc.	Program	SD	DD	WD	CD	POE
ECTA Board	X	X	X	X	X	X	X
Dept.							
Parks/Rec.	X	X	X	X	X	X	X
High/College	X	X		X			X
Maintenance	X	X		X			X
Site Director	X	X		X			X
RMHS	X	X		X			X
Architect	X	X	X	X	X	X	X
Contractor	X	X	X	X	X	X	

Cost data, site access during construction, and other factors will be addressed when the direct participation group is formed. When these criteria are addressed, the programming phase moves into the last stage, stating the problem.

Step 5: State the Problem

The last step of the process is to “State the Problem.” During this phase of the design, the organization expresses the significant conditions affecting the design of the project and establishes the general direction the project should go (Pena and Parshall 93). This part of the project will be formed by the direct participation group upon the completion of the previous four steps.

Summary:

This thesis project addresses the conceptual discussion design and the programmatic design phases of the Wesselman Tennis Center Master Plan. Through the structured design process afore described, the Evansville Community Tennis Association is empowered to create a vision for the facility that addresses community need and affirms their unique identity in Evansville, Indiana.

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- 1 12 Courts (Existing)
- 2 Club House
- 3 Family Picnic Pavilion
- 4 Water Feature
- 5 Community Arts
- 6 Stadium Court



Located in **Wesselman Park**, the additional facilities will add to the existing attractions within the Park.



Simple construction methods allow for volunteers to construct parts of the project and reduce cost.



A federal grant for **solar power** provides energy for the existing club house operations.



Integrated displays provide opportunities for local sponsors to invest in the tennis facility and advertise to the community.



Facility hosts larger events and brings families to Eastville's Downtown and other amenities.



ECTA Wesselman Tennis Center Discussion Plan



ON THE SHOW COURT Stadium Court hosts national collegiate tennis matches and USTA Professional Events. Viewing areas enclose all sides.



SPONSORING THE EXCITEMENT Stadium Court provides opportunities for endorsements and sponsorships, promoting the community and giving back.



SPLISH SPLASH Water feature provides a cool, refreshing place to gather, socialize, and watch your favorite players battle it out on the nearby courts.



VISIONS FOR THE FUTURE

"Our mission is simple. GROW tennis in the region."

ECTA